

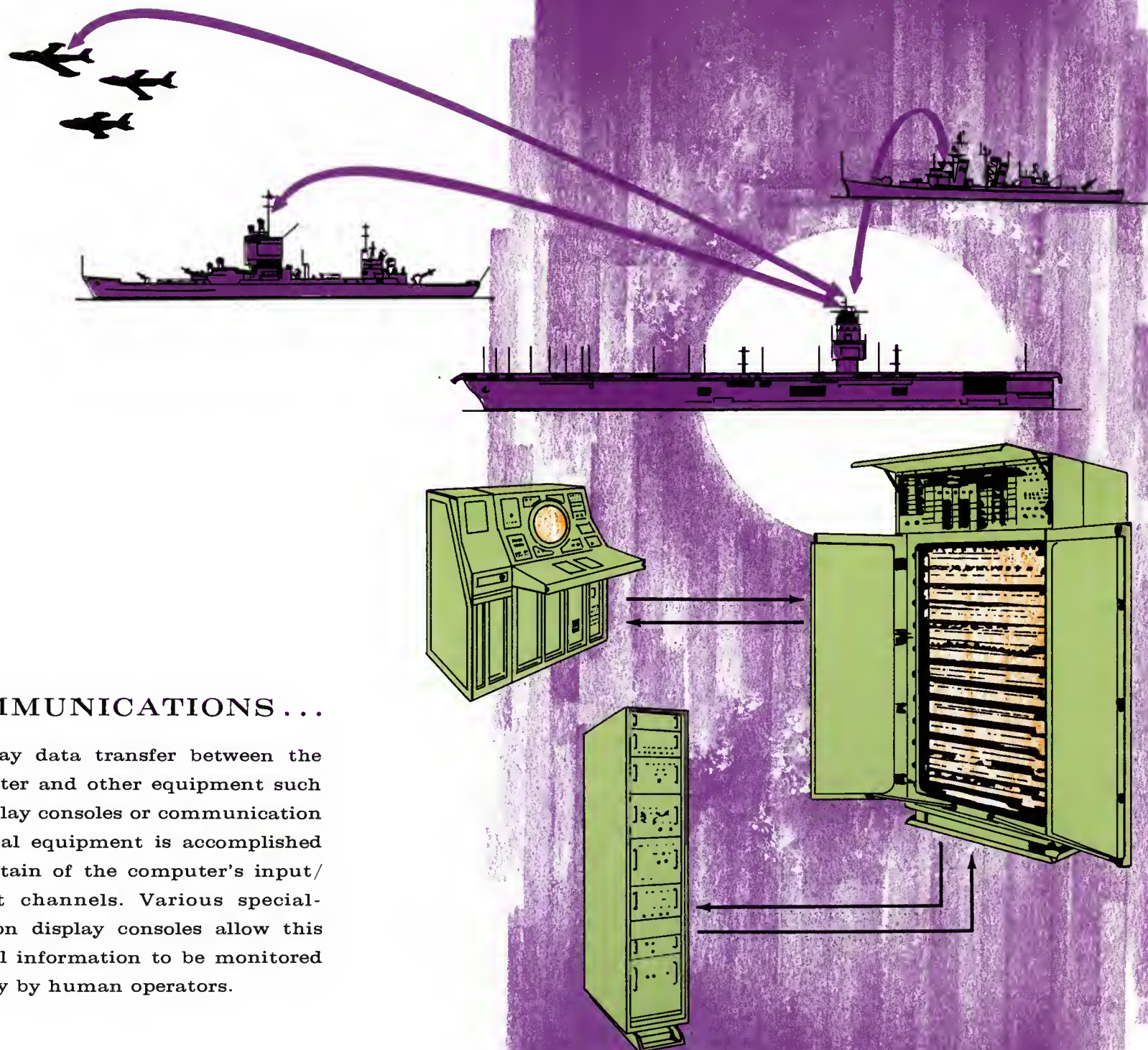
UNIVAC[®]
Unit Computer
CP-642A/USQ-20(V)
or
CP-642B/USQ-20(V)

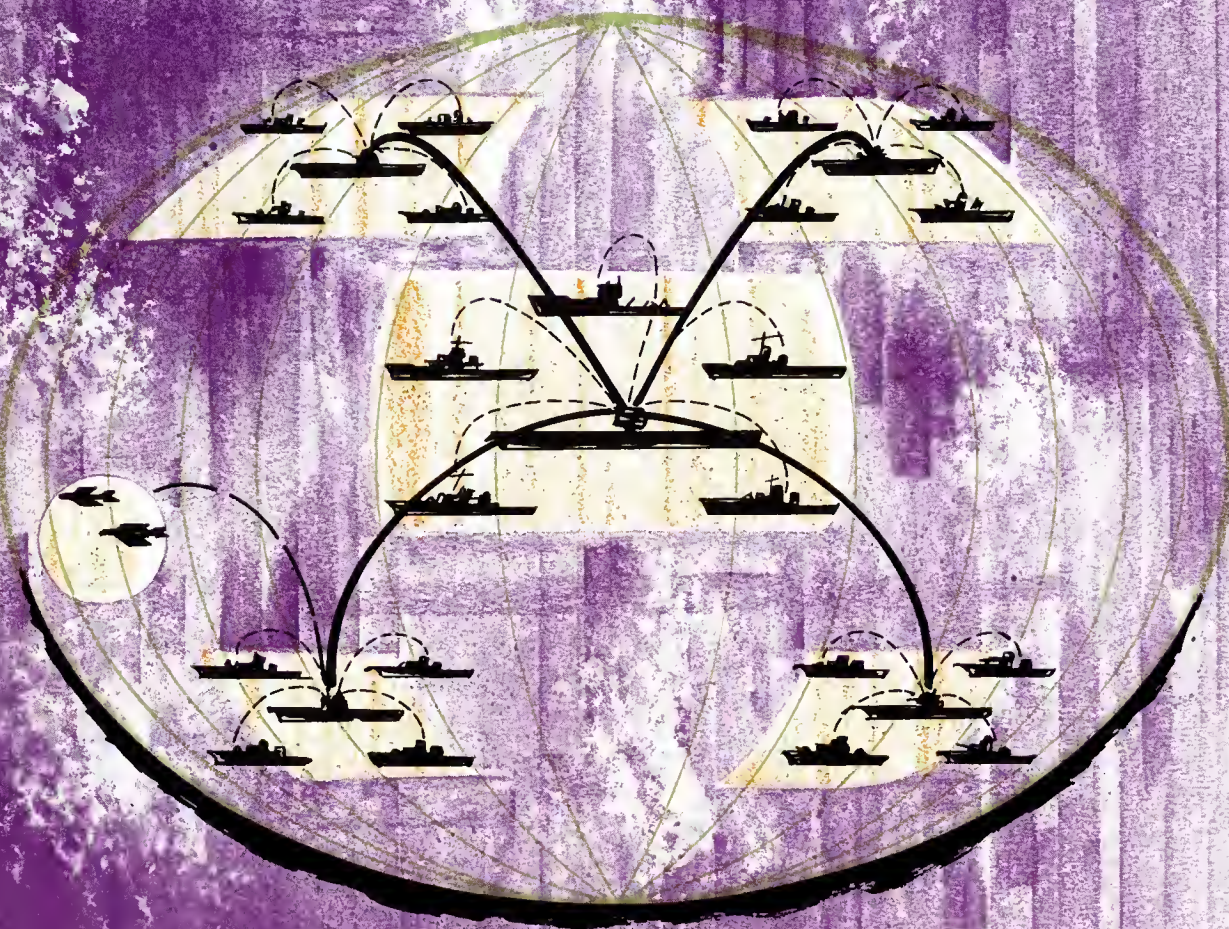
AUTOMATIC EQUIPMENT IN NTDS...

System components include a variety of electronic equipment: automatic high-speed, general-purpose stored program computers; modular display consoles; high-speed digital data communication facilities; radar video processors; readout devices; magnetic tape handlers; manual data entry devices; and analog to digital converters. The net result of all these components is an increase in the individual and collective data gathering and utilization capabilities of naval vessels.

COMMUNICATIONS...

Two-way data transfer between the computer and other equipment such as display consoles or communication terminal equipment is accomplished via certain of the computer's input/output channels. Various special-function display consoles allow this tactical information to be monitored visually by human operators.





Transmission of data to other ships in the task force allows each ship to know the entire tactical situation. NTDS accomplishes this with its automatic high-speed, digital data links which are employed in NTDS between ships and aircraft, and between NTDS and Non-NTDS ships in the force.

NTDS, however, more than just providing data exchange facilities, permits execution of programmed functions at computer speeds and solutions to problems previously handled by voice communications and manual means.



CAPABILITIES OF NTDS...

NTDS has improved the effectiveness of naval combat in the following ways:

- Tactical data collected by individual ships can be automatically processed and evaluated more capably.
- Information evaluated and contained in any one ship is immediately available to all ships in the force.
- Commanders can more realistically and accurately appraise the current tactical situation in total.
- Orders can be executed at increased effectiveness.

NTDS includes the following major capabilities:

- Data Gathering
- Data Evaluation
- Data Processing
- Graphic Display of Combat Situations
- Situation Estimation and Evaluation
- Decision
- Action Assignment Transmissions
- Status Reporting
- Continual Process Recycling





NTDS

NAVAL
TACTICAL
DATA
SYSTEM

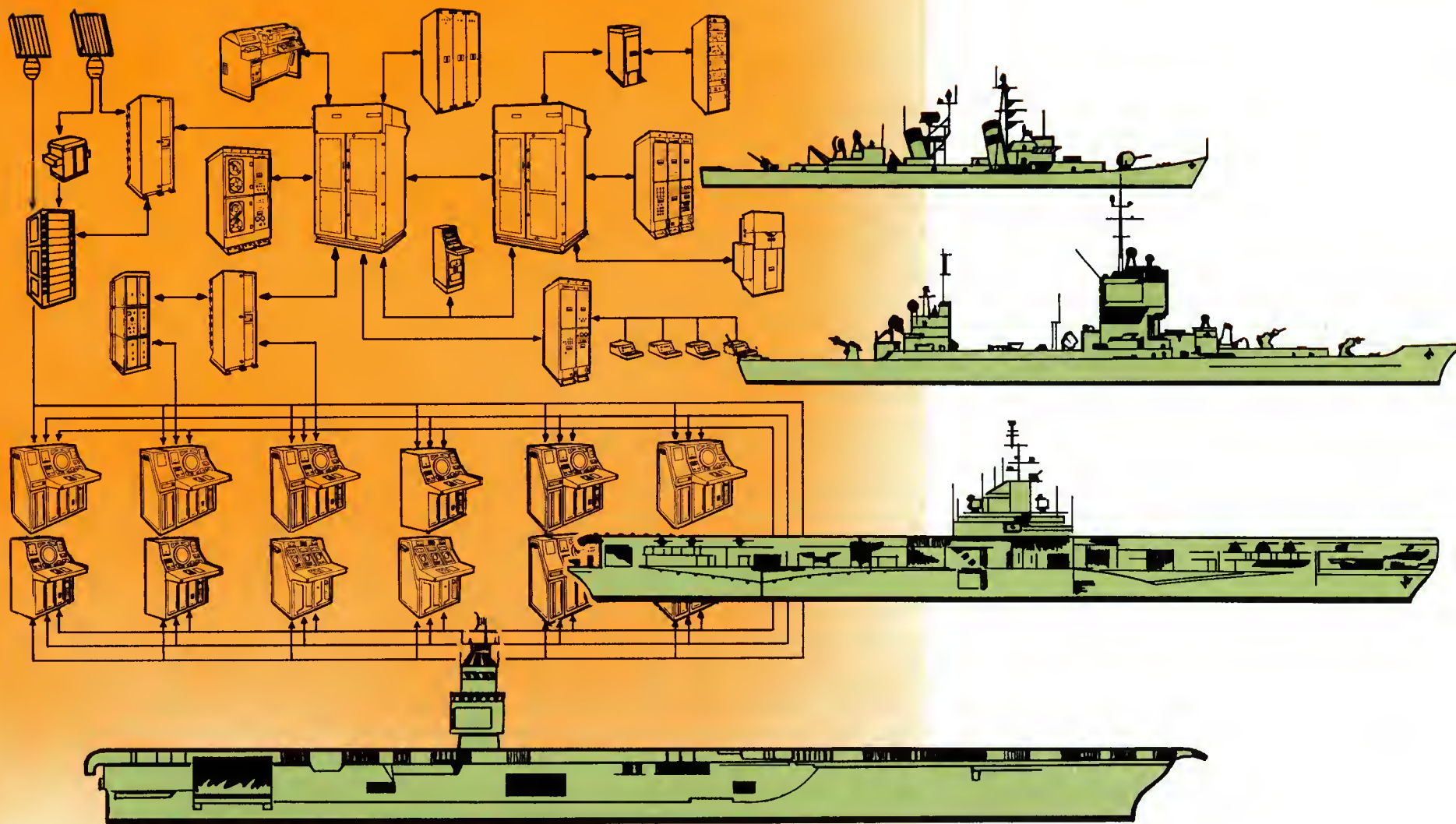
INTRODUCTION

Foreseeing the advances in weaponry, the U. S. Navy started in the mid 1950's to design an ultramodern system of automatically processing data to most effectively utilize its own advanced weapons and protect itself from modern enemy weapons. This effort has resulted in the new Navy which today is capable of successful operations in any modern warfare situation. The Naval Tactical Data System (NTDS) uses a modern solid state, ruggedized computer system to process, correlate, and evaluate tactical, navigation, and communications data. Over-all systems responsibility and operational concept and guidance stemmed from the Office of the Chief of Naval Operations. As Lead Bureau, the Bureau of Ships has been prime executor in system technical design, contract administration, and hardware implementation of the NTDS concept, aided in these duties by the Navy Electronics Laboratory with respect to analysis, test, evaluation, and design improvements of the experimental system. The UNIVAC Division of Sperry Rand Corporation and other major contractors provided the industrial talent necessary to translate the Navy's needs into fleet equipment.

Men and electronics are the basic combination in NTDS. In recent naval exercises, they have proved the fleet possesses the capabilities of modern offensive and defensive tactics.

The accompanying pages of this brochure broadly cover the main NTDS characteristics.

UNIVAC
DEFENSE MARKETING
5316 W. IMPERIAL HWY.
LOS ANGELES, CALIF. 90045
678-2531



NAVAL TACTICAL DATA SYSTEM...

- A system's approach that supplies the solutions to both defensive and offensive combat problems of Naval forces.
- Fast, accurate collection, processing, evaluation, display and dissemination of strategic and tactical data.
- Provides commanders with complete pictures of their current tactical environment.
- Men and machines in concert, employing the speed of the machines and the inherent decision-making power of the human element to effect a highly capable total system.

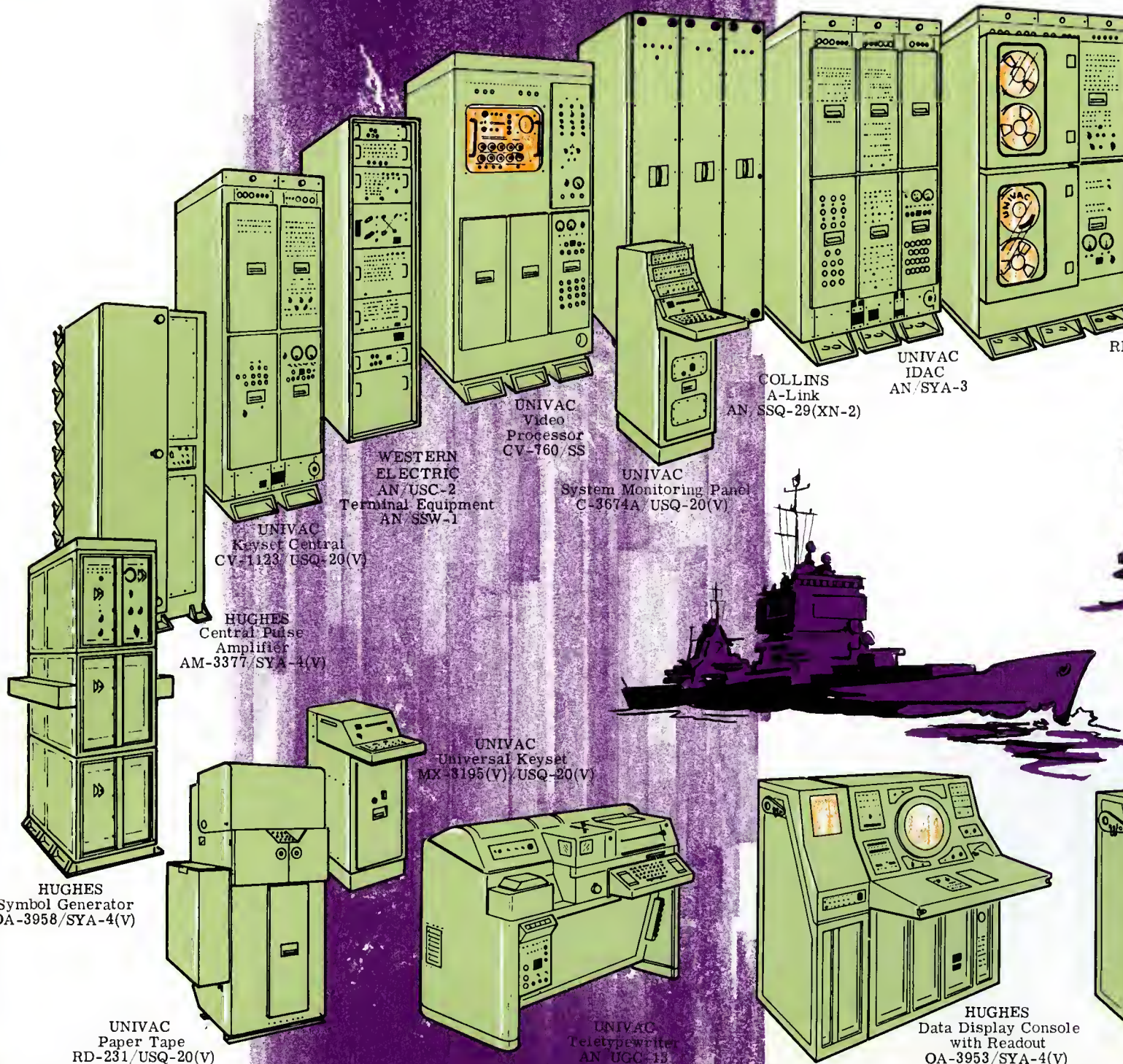
REAL-TIME PROCESSES

NTDS fulfills all data processing requirements as they appear. No queue is formed. Relative to speeds and time involved in a tactical situation, NTDS processes are accomplished with no discernible lapse of time.

Real-time inputs come into NTDS via sensors constantly sensing the tactical surroundings and from communications networks. These inputs must be handled by digital computers.

Real-time outputs to other systems are disseminated through data communications links that comprise the NTDS.





HUGHES
Symbol Generator
OA-3958/SYA-4(V)

UNIVAC
Paper Tape
RD-231/USQ-20(V)

HUGHES
Central Pulse
Amplifier
AM-3377/SYA-4(V)

UNIVAC
Keyset Central
CV-1123/USQ-20(V)

WESTERN
ELECTRIC
AN/USC-2
Terminal Equipment
AN/SSW-1

UNIVAC
Video
Processor
CV-760/SS

UNIVAC
Universal Keyset
MX-3195(V)/USQ-20(V)

UNIVAC
Teletypewriter
AN/UGC-13

UNIVAC
System Monitoring Panel
C-3674A/USQ-20(V)

COLLINS
A-Link
AN/SSQ-29(XN-2)

UNIVAC
IDAC
AN/SYA-3

UNIVAC
Magnetic
Tape Unit
RD-243/USQ-20

HUGHES
Data Display Console
with Readout
OA-3953/SYA-4(V)

HUGHES
Height-Size
Console
OA-3957/SYA-4(V)